

NON ABSORBING RETICLE AND METHOD OF MAKING SAME

ABSTRACT OF THE DISCLOSURE

A reticle or mask for use in projecting a circuit pattern, having a transparent substrate with a reflective or dielectric layer thereon. An opaque or blocking layer is placed over the reflective layer. The opaque layer then has a predetermined circuit pattern etched therein. In one embodiment, the opaque layer and the reflective layer are the same size. In another embodiment, the opaque layer has a size larger than the reflective layer. This permits the opaque layer to be adjacent the substrate, which is advantageous when projection optics having a high numerical aperture are used. The reticle of the present invention has particular advantage when using source wavelengths of between 157 nanometers and 365 nanometers. The reflective layer or land has a reflectance greater than chrome, and preferably greater than sixty percent. Therefore, the reflective layer greatly reduces reticle warm-up and thermal distortion.